



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,996	03/01/2002	Steven Mark Anlage	MR2833-14	5711

7590 12/10/2003

Morton J Rosenberg  
Rosenberg Klein & Lee  
3458 Ellicott Center Drive  
Suite 101  
Ellicott City, MD 21043

EXAMINER

NGUYEN, TUNG X

ART UNIT PAPER NUMBER

2829

DATE MAILED: 12/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/069,996	ANLAGE ET AL.	
	Examiner	Art Unit	
	Tung X Nguyen	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 26-29 is/are pending in the application.
- 4a) Of the above claim(s) 20-25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 is/are allowed.
- 6) ☒ Claim(s) 1, 11 and 26 is/are rejected.
- 7) ☒ Claim(s) 2-10, 12-18 and 27-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Election/Restrictions***

1. The response to election/restriction filed on 10/02/03 has been entered and made of record as paper number 1003. Claims 1-19, and 26-29 are pending.
2. Applicant's election of group I including claims 1-19, and 26-29 in Paper No. 1003 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
3. Applicant is required to cancel claims 20-25.

***Specification***

4. The abstract of the disclosure does not commence on a separate sheet in accordance with 37 CFR 1.52(b)(4). A new abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claims 1, 11, 26 are rejected under 35 U.S.C. 102(a) as being anticipated by Xiang et al. (u.s.p 6,173,604).

As to claims 1, 11, 26, Xiang et al. disclose in Figs. 1-2, an apparatus and method for determining the dielectric permittivity using a near-field scanning microwave

microscope having a resonator with probe tip comprising steps of: calibrating the near-field scanning microwave microscope to determine a geometry descriptor of the probe tip (col. 6, lines 55-65, and col. 23, lines 60-64, col. 10, lines 42-65); generating calibration curves (col. 23, lines 64-67); scanning a test sample in contact with the probe tip at scanning locations (via x-y-z scanning control 100 of figure 1) and generating at least one test sample frequency shift value at each scanning location (col. 23, lines 1-67); determining the dielectric permittivity of the test sample at the sample locations based on the frequency shift values and the calibration curves (col. 2, lines 37-55).

***Allowable Subject Matter***

7. Claim 19 is allowed.
8. Claims 2-18, 27-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 2-10, 12-18, 27-29, the prior art does not teach or suggest the calibrating steps having steps of: a) selecting a resonant frequency of the near-field scanning microwave microscope; measuring a background resonant frequency at the predetermined background measurement position; measurement a contact resonant frequency at the scanning position; and calculating the difference between the contact resonant frequency and the background resonant frequency; b) the geometry descriptor

Art Unit: 2829

comprising an aspect ratio of the probe tip, and the calibration step further including calculating the aspect ratio of the microscope probe tip wherein a distance along a z-direction parallel to a length of the resonator and the probe tip, and a radius distance extending from the central axis of the probe tip to its outermost surface; c) calculating the difference between the resonant frequency at the first predetermined height and the resonant frequency at the second predetermined height; As to claim 19, a processor for determining between at least one parameter related to a change in the resonant frequency and a known dielectric property value of a sample responsible for the change, wherein the processor is further able to receive from the feedback circuit the value for at least one parameter related to a change in the resonant frequency due to an unknown dielectric property of the sample and determine the value of the unknown dielectric property; in combination with the other claimed features.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung X Nguyen whose telephone number is (703) 305-3337. The examiner can normally be reached on 8:30am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (703)-308-1233. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-5841.

Art Unit: 2829

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

TN  
11/25/03



**EVAN PERT**  
**PRIMARY EXAMINER**